Paper reference BIT02
Pearson BTEC
Tech Award Level 1/2

Digital Information Technology

COMPONENT 2: Collecting, Presenting and Interpreting Data

Pearson Set Assignment

June 2023

Time: 6 hours (approximately)

X76342A

Pearson

YOU MUST HAVE

Books dataset.csv

Analysis and dashboard.xlsx

Reader information dataset.xlsx

YOU WILL BE GIVEN

Nil.

INSTRUCTIONS

This assessment may be given to learners as soon as it is received. This assessment is for use with the May 2023 – June 2023 moderation series. Please refer to the Administrative Support Guide for further information and mark submission deadlines.

INSTRUCTIONS TO LEARNERS

You should read the information given in the vocational context and each task section of this assignment carefully prior to starting work. Tasks often link to one another, so it is important to make sure you understand all tasks before starting the assignment.

The assignment will take approximately 6 supervised hours to complete.

This is divided into approximately:

- **1 hour to complete Task 1**
- **2.5 hours to complete Task 2**
- **2.5 hours to complete Task 3**

These timings are for guidance only, but should be used as an indication of how long to spend on each task. Your teacher will advise you when it is time to move from one task to the next.

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INSTRUCTIONS TO LEARNERS continued

You must work independently and should not share your work with other learners. All work must be your own and you must sign a declaration of authenticity to confirm this.

Any sources of information, ideas, text, audio and / or visual assets created by others that you include in your work must be clearly identified and referenced. Using the work of others as your own or without proper acknowledgement is considered plagiarism and can result in disqualification from the assessment.

You may ask your teacher for support if you have questions about the requirements of tasks, what evidence you need to produce and any resources you are allowed to access, such as your own course notes. They cannot give you feedback about how to improve your work, or guide you to solutions to any questions or problems in the tasks.

VOCATIONAL CONTEXT

The owner of a high street bookstore wants to know if it is worth continuing with in–store sales or whether to move over to online sales only.

Data has been collected using different data collection methods.

This data will be used for analysis and the creation of a dashboard.

You will also review a given dashboard.

TASKS

Task 1 – Data collection methods

Supervised hours to complete the task

You will need approximately 1 hour to complete Task 1.

The owner of a high street bookstore wants to know if it is worth continuing with in–store sales or whether to move over to online sales only. They also want to know a little about their customers.

To help the owner find out if the in–store sales are a success, data has been collected using two different data collection methods and collated into the Books dataset.

The data has been collected using these data collection methods:

- **information from the company website ordering system**
- **interviews with customers when they visited the store.**

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Task 1 continued

The owner of the company has calculated that only 20% of people who have purchased books participated.

The book review ratings are on a scale of 1 to 5, 1 being the lowest and 5 being the highest.

Produce a report on the suitability of the data collection methods used by the book store.

Your report should include:

- **the strengths and weaknesses of the given data collection methods**
- **how the features of data collection affect the reliability of the data**
- **the factors that might affect the quality of the data**
- **ways that the collection of data could be improved**
- **possible threats to customers who have data stored about them.**

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Task 1 continued

Learning outcome covered

OUTCOME A: Understand how data is collected and used by organisations and its impact on individuals.

Checklist of evidence required

A word–processed report.

Resources needed

Books dataset.csv

(Total for Task 1 = 12 marks)

Task 2 – Use data manipulation methods

Supervised hours to complete the task

Learners would need approximately 2.5 hours to complete Task 2.

You have been provided with two files:

- **Books dataset.csv**
- **Analysis and dashboard.xlsx**

The Analysis and dashboard spreadsheet includes three worksheets. You will need to use these worksheets for different tasks.

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Task 2 continued

Task 2a

The IMPORTED DATASET worksheet needs to be completed.

Import the Books dataset to the IMPORTED DATASET worksheet of the Analysis and dashboard spreadsheet file.

Format the worksheet to highlight headings and to ensure the spreadsheet is appropriate for other users. Text wrap must be used where column headings are long.

The owner wants to see how much discount each customer would be offered on their next book purchased using the Discount table on the Analysis worksheet. Add a column after the Book price column on the Imported Dataset worksheet to display the discount offered. Use an appropriate FUNCTION to display the discount amount for the first book in the list. Replicate the function for all the other books.

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Task 2 continued

The owner wants to see which books were purchased in–store. Use an appropriate formatting technique to make this information stand out.

Task 2b

The ANALYSIS worksheet needs to be completed.

Use a FUNCTION to calculate the total income for all books sold.

Use a FUNCTION to display the minimum price paid for books purchased online.

Use a FUNCTION to calculate the average income for books purchased in–store.

Use a FUNCTION to display the number of books sold that cost £7.99.

The owner is interested in how many customers use a library. Use a formula to calculate this value as a percentage (%).

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Task 2 continued

Some customers bought their book using a gift voucher. Their payment type is not shown. Use a FUNCTION to display the number of customers who used a gift voucher.

Cell F10 shows the review rating and next to it a given comment is displayed. You must add a suitable form control to allow the user to select the values (0 – 5) so that the relevant comment is displayed. The form control needs to restrict the values from 0 to 5.

Task 2c

The DASHBOARD worksheet needs to be completed.

Create a dashboard

Create a dashboard to present the work you completed on the IMPORTED DATASET worksheet and the ANALYSIS worksheet so it can be more easily understood by others.

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Task 2 continued

You need to use a range of appropriate presentation techniques to display the information in the DASHBOARD worksheet, such as:

- **tables**
- **pivot tables**
- **sparklines**
- **graphs / charts, including dynamic charts / graphs**

Learning outcome covered

OUTCOME A: Understand how data is collected and used by organisations and its impact on individuals.

OUTCOME B: Be able to create a dashboard using data manipulation tools.

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Task 2 continued

Checklist of evidence required

Completed spreadsheet – Analysis and dashboard.xlsx

Resources needed

Books dataset.csv

Analysis and dashboard.xlsx

(Total for Task 2 = 24 marks)

Task 3

Supervised hours to complete the task

Learners would need approximately 2.5 hours to complete Task 3.

You have been given the Reader information dataset for other information from the book store. The dataset includes data for some of their customers that joined its book club:

- **the reader's name**
- **how long they have been members of the club**
- **how many books they have bought each year of membership**
- **their gender**
- **the club rating on how good they think the club is**
- **their book buying trends.**

The dashboard includes charts and tables.

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Task 3 continued

Task 3a – Effectiveness of the dashboard

Use the Reader information dataset and dashboard to find:

- **trends**
- **patterns**
- **errors.**

Present your findings in a report and include any conclusions you can make based on these findings. Your report should include annotated screenshots from the dataset and dashboard to emphasise your findings and conclusions.

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Task 3 continued

Task 3b – How presentation affects understanding

Produce a report on the presentation methods and features used in the dataset and dashboard to display the summaries and information, and how they could be improved to ensure that:

- **information is not misinterpreted**
- **information is not biased**
- **inaccurate conclusions are not made.**

Your report should include annotated screenshots to emphasise any information you provide.

Learning outcome covered

OUTCOME A: Understand how data is collected and used by organisations and its impact on individuals.

OUTCOME C: Be able to draw conclusions and review data presentation methods and features.

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Task 3 continued

Checklist of evidence required

A word–processed report with annotated screenshots.

Resources needed

Reader information dataset.xlsx

(Total for Task 3 = 24 marks)

TOTAL FOR PAPER = 60 MARKS

END OF PAPER